Talent
Industrial

PP-R Pipping System Catalouge

"A pioneer and market leader in manufacturing water supply and drainage solutions"

Dear Customer ,

It is an honour to be a part of Such Organization and work with valuable Customers, efficient employers and esteemed suppliers like yourself .

Talent is one of the most trusted manufacturers of plastic Pipes and fittings incorporated in Egypt. The total installed capacity is 1800 Metric Ton per annum. This is being made possible because of our valuable customers who are the back bone of our company in promoting our pipes under the brand name of « Talent-therm ». We have recently installed the latest Technology to cater the growing demand in Domestic & Global Market .

Talent has constantly tried to be the best and our investments in product innovation and R&D have yielded fruitful results. Our skilled technicians and stringent quality checks have produced plastic Pipes to meet all the international quality standards.... My Sincere thanks to my dedicated team with whose support the company has been able to achieve the continuous and consistent growth pattern .

I Feel very happy to inform you that our company is not only on Egyptian map but its presence has also been felt Globally. The outlook of plastic pipes industry is very bright in Egypt because of infrastructure development and the expansion of New cities development , the Consumption of plastic pipes shall be at its peak. With best management practices and every attempt targeted to outdo our self. Talent Assures to be the front runner in its domain & achieve new dimensions of success.

I once again wish to convey my sincere thanks to our valued customer who have shown their dedication and consistent support and expect to keep on getting the same in future .

Thanks & Regards

CEO & Chairman

Ahmed Khalifa

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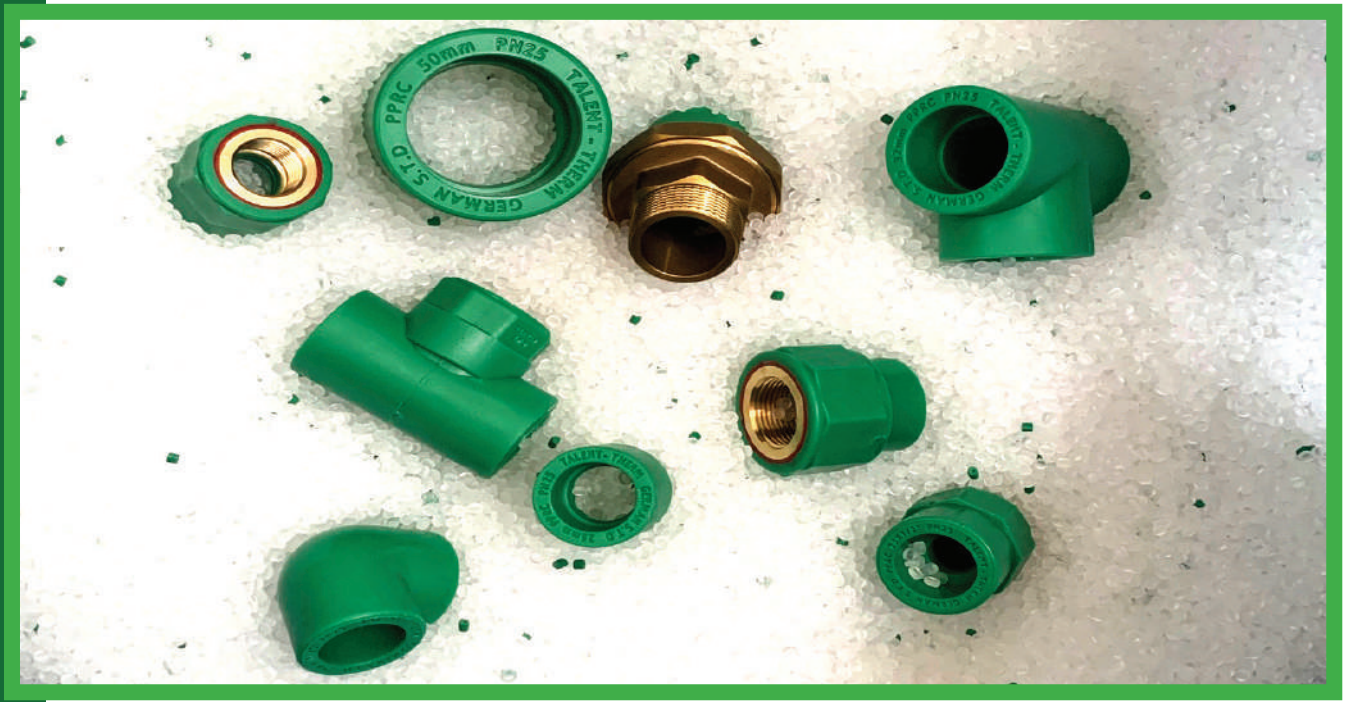
Talent - Therm

PPRC PIPES & FITTINGS SYSTEMS

Talent group :

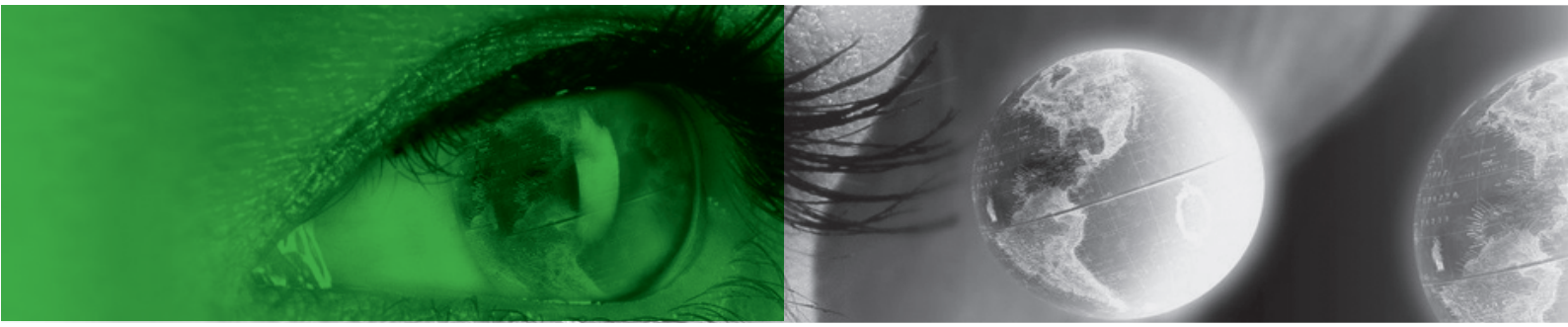
is established to introduce superior global industrials and produce one of the best PP-R systems for the water supply in the Egyptian market .

Talent-Therm® offers professionals a choice of reliable expertly produced plumbing products that will achieve a mutation with the market .



OUR VISION

To be an acknowledged leader in plastic piping industry by exceeding customers' expectations and maximizing bottom line for all our stake holders.



OUR MISSION

To bring a revolution in plastic piping industry through innovative solutions which would create a profitable growth and benefit our customers & the society at large.

OUR CORE VALUES

Respect: We respect & appreciate all individuals and cultural identities. We embrace the differences. We ensure harmonious working environment for all our employees.

Transparency: Transparency is the hallmark of all our business dealings. We communicate openly and sincerely, we appreciate feedback.

Commitment to Quality: We are committed to providing the best quality products to our customers.

Ownership: We believe in accepting responsibility and ownership while embracing common goals, teamwork and collaborative decision making.

Water is the basis of life, an indispensable resource for everyday use, for industry, and for agriculture. In light of increasing demands for water, Talent offers clean, efficient technologies and the highest level of safety for your use .
Because the quality of the system that carries your water can make all the difference in terms of safety , So you should make sure to choose the system that can offer optimum performance even under the most extreme conditions.
Talent-therm® means pure water, from the source to you .

Why you should choose Talent-Therm ?

1 - Our Products are always available
we like knowing that we're doing our absolute best. Your order is always available and ready for quick delivery that means any quantity of any product we offer . Extra-fast order fulfillment .

2 - After sales services & warranty

- Customer satisfaction : Talent is committed to maintain a management system with the prime focus on customer satisfaction by meeting their needs & expectations, and continual effective communication with their customers.
- Services : Our service doesn't end at delivery and install . Our team will ensure you are satisfied by meeting your needs and expectations , we will support you through our web site, social media pages , call center and customer service team any time you need help especially after sales.
- Warranty & guarantee : Because talent is committed to maintain the highest standards of quality for you , we provide guarantee for 10 years to our customers upon testing their plumbing .

3 - High Quality with best price
We use the latest equipment imported from our certified suppliers , We also import raw material from our certified global plants.
All our products are produced by the highest qualified employees in compliance with current European and global standards, as shown with quality section below .
Talent doesn't care to how to be a profitable organization, but how to deliver every customer with unbeatable prices within reach of all people.

ليه تختار منتجات TALENT ؟

١ – توافر المنتجات بصفة دائمة : نحن نبذل قصارى جهدنا و نسعى دائما لجعل طلبك متاح دائما و جاهز على التسليم السريع أيا كانت الكمية المطلوبة من أى نوع ستحصل عليها بسرعة فائقة .

٢ – خدمات ما بعد البيع & الضمان :

- رضا العملاء: تتعهد Talent بالتركيز بشكل أساسى على رضا العملاء أولا فى نظام ادارتها من خلال تلبية احتياجاتهم وتوقعاتهم ، والتواصل الفعال المستمر معهم .
- الخدمات : لا تنتهى خدماتنا عند التسليم والتركيب فقط لكن يعمل فريقنا للتأكد من مدى رضا العميل عن طريق تلبية احتياجاته بل وتوقعاته أيضا ، و نقدم الدعم دائما من خلال موقعنا الرسمى وصفحات وسائل التواصل الاجتماعى والاتصالات الهاتفية بفريق خدمة العملاء فى أى وقت تحتاج فيه إلى المساعدة خاصة بعد البيع.
- الضمان : نظرًا لأن شركتنا تلتزم دائما بالحفاظ على أعلى معايير الجودة بالنسبة لك ، فإننا نقدم ضمانًا لمدة ١٠ سنوات لعملائنا عند اختبار السباكة الخاصة بهم عند التركيب .

٣- جودة فائقة وبأفضل الأسعار : نستخدم فى مصانعنا أحدث المعدات المستوردة من أكبر الموردين المعتمدين عالميا وكذلك المواد الخام يتم استيرادها من أكفأ المصانع العالمية المعتمدة ، و يتم إنتاج جميع منتجاتنا من قبل أكفأ الموظفين المؤهلين وفقًا للمعايير الأوروبية والعالمية الحالية ، كما هو موضح فى الجزء الخاص بالجودة لاحقا . ولأن شركة Talent لا تضع الربح غايتها الأولى بل ان تصل منتجاتها لجميع العملاء بأسعار لا تقبل المنافسة و فى متناول اليد ، فانك ستجد منتجاتنا بأفضل الاسعار فى السوق على الاطلاق .

Characteristics & Properties :

Raw Material :

Talent-Therm® products for water supply solutions are produced with superior German quality, All pipes and fittings are made of the purest polypropylene random copolymers , type 3 (PP-R) and the best copper in Egypt for threaded fittings .

Scope and fields of applications:

- Cold and hot potable water
- Swimming pool installation
- Rainwater application
- Heating systems
- Pipelines for industrial use
- Air conditioning system
- Agriculture and Irrigation systems and Industrial use
- Fire Protection Installation .
- Chemical liquids
- Ship building installation

Smooth and Easy to install

The smooth internal surface of PP-R products reduces frictional losses and prevents fouling and scaling in long term . All products are flexible , light , easy to cut and easy to fused for installation.

Resistance to current strays and Fire protection

Talent-Therm® system is a poor electrical conductor , So there is no risk of stray current occurring .
As Talent-Therm® system is normal inflammable and do not produce any toxic gas , So it is no risk of dioxin emission .

Soundproof-ness

Talent-Therm® system is highly soundproof because of its ability to absorb and eliminate almost all vibrations.

Non Toxic and environmental harmless

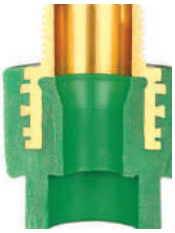
The row material of Talent-Therm® products is absolutely non toxic according to national and international standards , All Products are physiologically , environmentally and microbiologically harmless .

UV Resistance

Talent-Therm® Products are UV resistant but should not be installed without protection where subject to UV radiation , Pipes and Fittings are equipped with UV stabilizer . However, the maximum storage time in the open air is six months .

Brass

All Talent – Therm® fittings with brass have the highest fixation power between brass and PPR material as they are manufactured from the best copper alloy in Egypt , which produced according to the EN12449 standard , which does not interact with water, does not rust, does not corrode or crack after removing and installing the fittings several times.



Low Thermal conductivity

Talent-Therm® has low thermal conductivity (0.24 W / m.k) that reduces the heat dispersion of the fluid that it conveys , It also reduces the condensation which normally forms on the outside of pipes under specific hygrometric conditions .

Low Pressure Loss

All our PP-R products have smooth internal surface with very small irregularities (0.0070 µ) , That reduces frictional losses and prevents fouling and scaling in long term , It also convey significant reduction in pressure loss . As result , Lime stone cannot build up inside the pipe .

Service life time

Talent-Therm® systems should last more than 50 years under continuous duty at pressure of 10 bar , and temperature of 60 ° C for PN 20 pipes .

General Properties

	Characteristic	Method	Value	Unit
Physical Properties	Density 23 ° C	ISO 1183	0.895	g/cm ²
	Vicat softening , Temperature (0.98 N)	ISO 306	130	° C
Rheology	Melt Mass flow rate 230° C/2.16 kg	ISO 1133	0.3	g/10 min
Mechanical Properties	Tensile modules (1 mm / min)	ISO 527-1.2	900	Mpa
	Tensile stress yield (50 mm /min)	ISO 527-1.2	27	Mpa
	Tensile strain yield (50 mm /min)	ISO 527-1.2	13	%
	Charpy impact trength at 23 ° C	ISO 179 /1eU	N.B	K j/m²
	Charpy impact trength notched at 23 ° C	ISO 179 /1eU	38	K j/m²
	Charpy impact trength notched at -20° C	ISO 179 /1eU	2	K j/m²
Thermal Properties	Heat deflection temperature 0.45Mpa(HTD/B)	ISO 75-1.2	88	° C
	Mean coefficient f linear , expansion 0-110 ° C	DIN 53752	1.5×10^{-4}	K^{-1}
	Thermal conductivity	DIN 526 12-1	0.23	K^{-1} M^{-1}
Electrical Properties	Surface resistance	DIN 53482	$>10^{13}$	Ohm.cm

Chemical Resistance

Due to Talent -Therm PPR material properties , All Pipes and fittings are generally chemical resistant such as acid , lime , etc as shown with the below table .

Signs and symbols :
VL = moderate loosening , mass part ≤ 10 %
L = moderate loosening , mass part > 10 %z
GL = saturated (with 20 ° C) , Hydrous solution
TR = Medium rate flow is minimum – technical pure
H = Usual in trade Composition
+ = resistant **0** = limited resistance **-** = inconstant

Chemical Resistance

Chemicals	Conc. %	Temperature		
		20 ° C	60 ° C	100 ° C
Acetic Acid (glacial acetic acid)	100	+	0	+
Acetic Acid aq.	50	+	+	-
See also vinegar	10	+	+	
Acetic Acid Anhydride	100	+		0
Acetone (boiling point 56.3° C)	100	+	0	
Alcoholic iodine		+		
Alum	sat	+	+	
Alum aq.	any	+	+	
Aluminim salts aq.	any	+	+	+
Ammonia , gaseous	any	+	+	
Ammonia aq.	Conc.	+	+	
	10	+	+	
Ammonium acetate	any	+	+	+
Ammonium Carbonate aq.	any	+	+	+
Ammonium Cloride aq.	any	+	+	+
Ammonium Nitrate aq.	any	+	+	+
Ammonium phosphate aq.	any	+	+	+
Ammonium sulphate aq.	any	+	+	+
Amyl alcohol, Pure		+	+	
Aniline	100	+	(+)	
Antifreezing agent (cars)		+	+	
Apple juice		+	+	
Batterie Acid		+	+	
Barium Salts	any			
Benzaladyhyde	100	+	+	
Benzene	100	+		
Beer	H	+	+	
Bleaching solution	20	0	0	+
Borax	L	+	+	-
Boric acid	GL	+	+	
Bromine,liquide	TR	-	-	+
Bromine ,Vapours	all	0	-	-
Bromine Water	GL	0	-	-
Botane gas	TR	+	+	-
Butyle acetate				
Butyl acetate	TR	0	-	-
Calcium Cloride	GL	+	+	

Temperature	Conc. %	Temperature		
		20 ° C	60 ° C	100 ° C
Calcium nitrate	GL	+	+	+
Castor oil	TR	+	+	
Com oil	TR	+	0	
Coconut oil	TR	+		
Chior, Liquid	TR	-	-	
Chlorine ,gaseous wet	1	-	-	-
Chiorobenzene	TR	0		-
Chloride of lime	All	+	+	
Chloroform	TR	0	-	
Chlorosulphonic acid	TR	-	-	-
Chlorine Water	GL	0	-	-
Chromic sulphuric acid		-	-	
Citric acid ,hydr.	VL	+	+	+
Cresol	90	+	+	
Cyclohexane	TR	+		-
Cyclohexanol	TR	+	0	
Cyclohexanone	TR	0	-	
Dekahydronaphtaline	TR	0	-	-
Detergent	VL	+	+	
Dibutyl Phthalate	TR	0	-	-
Diesel oil	H	+	0	-
Diethylether	TR	+	0	
-1,4 Dixane	TR	0	0	
Ethyl acetate	TR	+	0	-
Ether				
Ethyl Benzene	TR	0	-	-
Ethyl Chloride	TR	-	-	-
Vinegar	H	+	+	
Formic Acid	85 10	+ + +	0 0 +	- 0
Formaldehyde,hydr.	40	+	+	
Fruit Juices	H	+	+	+
Fuel oil	H	+	0	
Glycrine	TR	+	+	+
Hydrogen , chloride , gaseous	TR	+	+	-
Hydrochloric acid ,hydr.	Up to 20 36 - 20	+ +	+ 0	
Hydroggen Peroxide,hydr.	30	+	0	
Hydrofluoric acid solution	40	+	+	
Heptone	TR	+	0	-
Hexane	TR	+	0	
Iso-octane	TR	+	0	-
LANOLINE	H	+	0	

Temperature	Conc. %	Temperature		
		20 ° C	60 ° C	100 ° C
Linseed oil	H	+	+	+
Lactic acid	90	+	+	
Magnesium salts	GL	+	+	
Menthol	TR	+	0	
Mercury	TR	+	+	
Mercury salts	GL	+	+	
Methanol	TR	+	+	
Methylene Chloride	TR	0	-	-
Methyl ethyl Ketone	TR	+	0	
Milk	H	+	+	
Motor oil (Motor Vehicles)	TR	+	0	
Nickle salts ,hydr.	GL	+	+	
Nitric acid hydr.	10	+	0	
Oleum	TR	-	-	-
Olive oil	TR	+	+	0
Oliec acid	GL	+	0	-
Oxalic	GL	+	+	0
Ozone	0.5 ppm	+	0	
Paraffin	H	+	+	
Paraffin oil	TR	+	0	-
Peanut oil	TR	+	+	
Perchlorethylene				
Petroleum ether	TR	+	0	
Petroleum	TR	+	0	
Petroleum jelly	TR	+	0	
Peppermint oil	TR	+		
Phenol (hydr. Phase)	5	+	+	
Phosphoric acid	85	+	+	+
Photographic developer	H	+	+	
Caustic potash solution				
Potassium hydroxide	50	+	+	+
Potassium carbonate(potash)	GL	+	+	
Potassium chlorate	GL	+	+	
Potassium chloride	GL	+	+	
Bichromate of potash	GL	+	+	
Potassium Iodide	GL	+	+	
Potassium nitrate ,hydr.	GL	+	+	
Potassium permanganate	GL	+	-	
Potassium persulphate	GL	+	+	
Pine needle oil	H	+	0	
Propane , gaseous	TR	+	0	
Pyridine	TR	0	0	
Sea water	H	+	+	+

Temperature	Conc. %	Temperature		
		20 ° C	60 ° C	100 ° C
Silver saltes	GL	+	+	
Silicon oil	TR	+	+	+
Succinic acid ,hydr.	GL	+	+	-
Sulphur dioxide	TR	+	+	
Carbonum disulphide	TR	-	-	-
Sulphuric acid , hydr.	80 – TR 80 – 10 10	0 + +	- + +	 + +
Hydrogen Sulphide	TR	+	+	
Sodium carbonate (soda)	50	+	+	0
Sodium chlorate	GL	+	+	
Sodium chloride	VL	+	+	+
Sodium chlorite,hydr.	2-20	+	0	-
Sodium hydrochlorite,hydr.	10	+		
Sodium nitrate	GL	+	+	
Sodium nitrite	G	+	+	+
Sodium phosphate	GL	+	+	
Sodium sulphate	GL	+	+	
Sodium sulphide	GL	+	+	
Sodium sulphite	40	+	+	+
Sodium thiosulphate	GL	+	+	
Caustic soda solution	Up to 60	+	+	+
Soybean oil	TR	+	0	
Strach solution , hydr.	all	+	+	
Sugar sirup	H	+	+	
Stannous Chloride	GL	+	+	
Tartaric acid ,hydr.	10	+	+	
Turpentine oil	TR	-	-	-
Turpentine substitute	TR	+	0	-
Tetrachloroethane	TR	0	-	-
Tetrachloroethylene	TR	0	0	
(Perchlorethylen)				
Carbon Tetrachloride	TR	-	-	-
Tetrachydrofurane	TR	0	-	-
Tetrachydronaphtalene (Tetralin)	TR	-	-	-
Toluene	TR	0	-	-
Transformer oil	TR	0	-	
Trichloroethlene	TR	-	-	-
Tricresyl Phosphat	TR	+	0	
Trioctyl phosphat	TR	+		
Uria , hydr.	GL	+	+	
Water	H	+	+	+
Wine	H	+	+	
Xelene	TR	0	-	-
Zinc salts , hydr.	GL	+	+	

Quality

Quality system

TALENT has total commitment to Quality Management System which forms the frame work for all company activities and processes.

With the pace of change and the rate of innovation, TALENT INDUSTRIAL is aware that a great process today will be imagined in a few months and obsolete shortly thereafter.

Thus, TALENT INDUSTRIAL continuously evaluates, analyze and improve its processes to keep the level of our product competence.

The Quality Management System is used to enable us to continually improve customer satisfaction by meeting their needs and expectations, improve quality performance and the value of our organization. Our quality is based on the firmly anchored quality awareness of our dedicated employees on a positive, creative work ambience, and ensuring their satisfaction at all levels through motivation.

To achieve this, we are reviewing and refining our processes to ensure we are one step ahead in our preparation and when approaching any project or task.

With unwavering commitment to quality, we have implemented controls and procedures proven to meet the quality standards.

You can expect excellence from design to delivery, continuous in-process inspections through final inspections. All of our QC employees are specially trained and regularly lectured to keep them informed with client feedback. This is to find solutions to any problem to make production more efficient and ensure any defects that occur are never repeated.

Quality Control procedures

The production of pipes and fittings requires the supervision, regulation and control of all the working operations.

All results are recorded and documented includes:

- Acceptance testing of raw materials and incoming goods.
- Process control.
- Inspection and testing of products.
- Final inspection and sample tests on the production batches.

This procedure is required by the standard that regulates the Quality Management System (UNI EN ISO 9001) and the relevant protocols for the quality control of piping systems for the transport of water inside buildings (UNI EN ISO 15874, ASTM F2389, etc.).

System Standards

All products are produced in compliance with global standards as we implement international institutes' policies to ensure your absolute satisfaction.

Germany standards

DIN 8063 ,8062 ,8061 & DIN 8080 ,8079 ,8078 , 8077 & DIN 19560, 16962,4102

International Standards

ISO 2-15874 & ISO 3-15874 & ISO 4422

Egyptian standards

ES 848 & ES 1717 & ES 3703 & ES 5232

European Standards

EN 16962 & BS EN 681

Internal Control

A team of highly qualified and skilled employees ensure that all assessments are carried out according to the appropriate regulations and fulfill all technical arrangements in accordance with the quality policy.

All internal quality controls are documented, recorded and stored in accordance with the provisions of law .

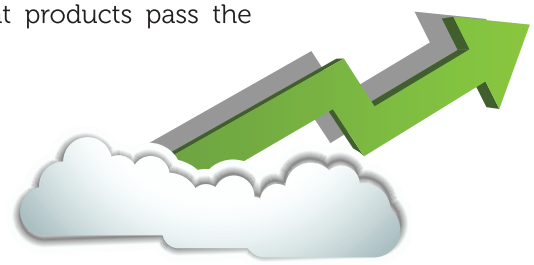
Acceptance of incoming goods

All incoming goods are subject to specific tests that guarantee that incoming products conform to the specified requirements.

In Progress Inspection and Test

The quality plan adopted by TALENT INDUSTRIAL requires that tests and inspections are carried out before and during the production process.

During the production phase, the quality plan establishes that products pass the following tests:



- Dimensional check .
- Surface check .
- Marking check .
- Control of process parameters .

The samples are collected and sent to the quality department that performs quality checks and performance testing on the products and submits them to various degrees and types of stress (pressure, temperature, oxidation, etc.).

Final Inspection and Testing

The quality plan adopted by TALENT INDUSTRIAL requires that the inspections and tests are carried out on the entire production cycle.

All test results are documented in the test report and the certificate (available on request).

Final tests include:

- Internal pressure test at °95 C (time and pressure are specified in the reference Standard);
- Cold impact test;
- Oxidation induction time;
- Melt flow index;
- Homogeneity test with polarized light microscopy;
- Dimensional checks;
- Elongation test with dynamometer;
- Tensile test (> 23 N/mm2) with dynamometer.

After the final tests, more tests are carried out on some batches:

- Thermal cycle: pipes and fittings are subjected to temperature cycles lasting 15 minutes at °95 C and 15 minutes at °20 C with a pressure of 10 bar for a total of 5.000 cycles;
- Oxidation induction time: determining the percentage of antioxidants in the Product after the extrusion process;
- Thermal stability at °110 C for 8.760 hours (= 1 year).

Storage /Packing /Shipping

Upon positive test results, the products are suitably packaged and stored in suitable warehouses.

External Audit

TALENT INDUSTRIAL submits its management and production system to external audits performed by third party certification bodies.

The external audit consists of tests carried out at given intervals.

Audit frequency depends on the procedure established by the spe- cific standard and by each certification body.

The external supervision also provides:

- Verification of the quality system;
- Calibration of test equipment;
- Hygiene and toxicity tests.

The results are confirmed by test certificates obtained by TALENT INDUSTRIAL

Quality policy

TALENT CO.
Industrial Units (24&12),
Factories complex 118,
El-Raswa-South,
Port said, Egypt.
0663723480

At Talent, Quality is an integral part of our business principles and Fostering quality culture is our main objective.
Talent is committed to maintain a management system with the prime focus on customer satisfaction by meeting their needs & expectations.
That will be achieved by continual improvement in respect of:-

- Developing our products and services with zero defects that are trusted and preferred by our consumers.
- Complying with relevant laws and regulations as well as internal requirements.
- Continually effective communication with customers and suppliers
- Ensuring employees satisfaction at all levels and Developing our human resources .

Date

01/02/2019

Signature

Ahmed Khalifa

Talent - Therm
PPRC PIPES & FITTINGS SYSTEMS

Our Products


TALENT THERM
PPR PIPE TYPE

Talent–Therm® PP-R Pipes

PPRC PIPE - PPRC PIPE - PPRC PIPE - PPRC PIPE

مواسير بولي بروبلين ضغط ١٦ بار
PPRC pipe PN 16

مقاس/م Size/mm	تعبئة Packing	Art No.
25	100	1008
32	60	1009
40	48	1010
50	24	1011
63	20	1012
75	12	1013
90	8	1014
110	4	1015

مواسير بولي بروبلين معزول ضغط ١٦ بار
PPRC pipe UV PN 16

مقاس/م Size/mm	تعبئة Packing	Art No.
25	100	1035
32	60	1036
40	48	1037
50	24	1038
63	20	1039
75	12	1040
90	8	1041
110	4	1042

مواسير بولي بروبلين ضغط ١٠ بار
PPRC pipe PN 10

مقاس/م Size/mm	تعبئة Packing	Art No.
32	60	1000
50	24	1002
63	20	1003
75	12	1004
90	8	1005
110	4	1006

مواسير بولي بروبلين ضغط ٢٠ بار
PPRC pipe PN 20

مقاس/م Size/mm	تعبئة Packing	Art No.
20	160	1016
25	100	1017
32	60	1018
40	48	1019
50	24	1020
63	20	1021
75	12	1022
90	8	1023
110	4	1024

مواسير بولي بروبلين معزول ضغط ٢٠ بار
PPRC pipe UV PN 20

مقاس/م Size/mm	تعبئة Packing	Art No.
25	100	1044
32	60	1045
40	48	1046
50	24	1047
63	20	1048
75	12	1049
90	8	1050
110	4	1051

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PPRC PIPE - PPRC PIPE - PPRC PIPE - PPRC

مواسير بولي بروبلين فايبر
SDR 7.4
PPRC pipe Fiber SDR 7.4

مقاس/م Size/mm	تعبئة Packing	Art No.
25	100	1062
32	60	1063
40	48	1064
50	24	1065
63	20	1066
75	12	1067
90	8	1068
110	4	1069

مواسير بولي بروبلين فايبر
SDR 6
PPRC pipe Fiber SDR 6

مقاس/م Size/mm	تعبئة Packing	Art No.
25	100	1071
32	60	1072
40	48	1073
50	24	1074
63	20	1075
75	12	1076
90	8	1077
110	4	1078

مواسير بولي بروبلين فايبر معزول
SDR 7.4
PPRC pipe Fiber+UV SDR 7.4

مقاس/م Size/mm	تعبئة Packing	Art No.
25	100	1089
32	60	1090
40	48	1091
50	24	1092
63	20	1093
75	12	1094
90	8	1095
110	4	1096

مواسير بولي بروبلين فايبر معزول SDR 6
PPRC pipe Fiber+UV SDR 6

مقاس/م Size/mm	تعبئة Packing	Art No.
25	100	1098
32	60	1099
40	48	1100
50	24	1101
63	20	1102
75	12	1103
90	8	1104
110	4	1105

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Talent–Therm® PP-R Fittings

PPR Fitting - PPR Fitting - PPR

جلبه لحام بولي بروبلين
PPRC Socket

مقاس/م Size/mm	تعبئة Packing	Art No.
20	250	1106
25	200	1107
32	120	1108
40	100	1109
50	48	1110
63	30	1111
75	70	1112
90	50	1113
110	40	1114

كوع لحام بولي بروبلين
PPRC Elbow 90°

مقاس/م Size/mm	تعبئة Packing	Art No.
20	200	1236
25	120	1237
32	60	1238
40	50	1239
50	25	1240
63	12	1241
75	30	1242
90	25	1243
110	15	1244

مشترك لحام بولي بروبلين
PPRC T

مقاس/م Size/mm	تعبئة Packing	Art No.
20	120	1356
25	90	1357
32	50	1358
40	20	1359
50	15	1360
63	12	1361
75	30	1362
90	20	1363
110	15	1364

كوع مفتوح لحام بولي بروبلين
PPRC Elbow 45°

مقاس/م Size/mm	تعبئة Packing	Art No.
20	200	1338
25	120	1339
32	60	1340
40	50	1341
50	30	1342
63	12	1343
75	30	1344
90	25	1345
110	15	1346

طبه اختبار بولي بروبلين
PPRC Test Plug

مقاس/م Size/mm	تعبئة Packing	Art No.
½"	120	1554

طبه لحام بولي بروبلين
PPRC Endcap

مقاس/م Size/mm	تعبئة Packing	Art No.
20	300	1555
25	180	1556
32	120	1557
50	50	1559
63	30	1560
75	10	1561
90	30	1562
110	25	1563

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PPR Fitting - PPR Fitting - PPR Fitting

جلبه لحام نقاص بولي بروبلين
PPRC Reducer Socket

مقاس/م Size/mm	تعبئة Packing	Art No.
20/25	300	1152
20/32	150	1153
20/50	50	1155
20/63	30	1156
25/32	120	1157
25/50	50	1159
25/63	30	1160
32/50	50	1163
32/63	30	1164
50/63	30	1172
50/75	70	1173
63/75	70	1176
63/90	50	1177
63/110	40	1178
75/90	50	1179
75/110	40	1180
90/110	40	1181

مشترك لحام نقاص بولي بروبلين
PPRC Reducer T

مقاس/م Size/mm	تعبئة Packing	Art No.
20/25	90	1403
20/32	50	1404
20/50	15	1406
20/63	12	1407
25/32	50	1408
25/50	15	1410
25/63	12	1411
32/50	15	1414
32/63	12	1415
50/63	12	1424
50/75	30	1425
63/90	20	1429
63/110	10	1430
75/90	20	1431
75/110	10	1432
90/110	10	1433

كرنك لحام بولي بروبلين
PPRC Short Crossover

مقاس/م Size/mm	تعبئة Packing	Art No.
20	90	1545
25	60	1546
32	40	1547

قفيز تثبيت بولي بروبلين
PPRC Wall Clamp

مقاس/م Size/mm	تعبئة Packing	Art No.
20	250	1573
25	250	1574
32	250	1575

كرنك طويل بولي بروبلين
PPRC Long Crossover

مقاس/م Size/mm	تعبئة Packing	Art No.
20	50	1551
25	40	1552
32	20	1553

بطاريه لحام بولي بروبلين
PPRC Manifold

مقاس/م Size/mm	تعبئة Packing	Art No.
25/50	8	1434
32/50	8	1435
25/63	8	1436
32/63	8	1437

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PPR Thread Fitting - PPR Thread Fitting

جلبه بولي بروبلين سن داخلي
PPRC Socket Female Thread

مقاس/م Size/mm	تعبئة Packing	Art No.
20/ ½“	200	1124
20/ ¾”	160	1125
25/ ½“	160	1126
25/ ¾”	90	1128
32/ ¾”	100	1129
32/ 1”	100	1130
50/ 1½”	30	1132
63/ 2”	25	1134

جلبه بولي بروبلين سن خارجي
PPRC Socket male Thread

مقاس/م Size/mm	تعبئة Packing	Art No.
20/ ½“	200	1138
20/ ¾”	160	1139
25/ ½“	120	1140
25/ ¾”	90	1141
32/ ¾”	60	1143
32/ 1”	56	1144
50/ 1½”	35	1146
63/ 2”	28	1148

مشترك بولي بروبلين سن خارجي
PPRC T male Thread

مقاس/م Size/mm	تعبئة Packing	Art No.
20/ ½“	80	1390
20/ ¾”	75	1391
25/ ½“	50	1392
25/ ¾”	45	1393

قاعدة محبس دفن
Concealed Valve Base

مقاس/م Size/mm	تعبئة Packing	Art No.
20	80	1387
25	50	1388
32	40	1389

كوع بولي بروبلين سن داخلي
PPRC Elbow 90° Female Thread

مقاس/م Size/mm	تعبئة Packing	Art No.
20/ ½“	90	1254
25/ ½“	90	1256
25/ ¾”	60	1257
32/ ¾”	40	1259
32/ 1”	50	1260

كوع مزدوج بولي بروبلين سن داخلي
PPRC Elbow 90° Double Female Thread

مقاس/م Size/mm	تعبئة Packing	Art No.
20/ ½“	25	1267
25/ ½“	25	1268

مشترك بولي بروبلين سن داخلي
PPRC T Female Thread

مقاس/م Size/mm	تعبئة Packing	Art No.
20/ ½“	90	1374
20/ ¾”	60	1375
25/ ½“	60	1376
25/ ¾”	50	1377
32/ ¾”	40	1379
32/ 1”	40	1380

كوع بولي بروبلين سن خارجي
PPRC Elbow 90° male Thread

مقاس/م Size/mm	تعبئة Packing	Art No.
20/ ½“	90	1271
20/ ¾”	85	1272
25/ ½“	60	1273
25/ ¾”	55	1274
32/ ¾”	40	1276
32/ 1”	35	1277

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PPR Valves & Unions - PPR Valves &

لاكور تجميع نحاس سن خارجي
PPRC Union male Thread

مقاس/م Size/mm	تعبئة Packing	Art No.
20/ ½“	80	1224
25/ ¾”	50	1226
32/ 1”	30	1229
50/ 1½”	15	1231
63/ 2”	10	1232

لاكور تجميع نحاس سن داخلي
PPRC Union Female Thread

مقاس/م Size/mm	تعبئة Packing	Art No.
20/ ½“	100	1212
25/ ¾”	60	1214
32/ 1”	40	1217
50/ 1½”	20	1219
63/ 2”	15	1220

محبس دفن
PPRC Concealed Valve

مقاس/م Size/mm	تعبئة Packing	Art No.
20	10	2453
25	10	2454
32	10	2455

محبس دفن سوبر
PPRC Concealed Valve Elite

مقاس/م Size/mm	تعبئة Packing	Art No.
20	10	1472
25	10	1473
32	10	1474

مشتمل محبس دفن
PPRC Valve set

مقاس/م Size/mm	تعبئة Packing	Art No.
1”	1	2456

مشتمل محبس دفن سوبر
PPRC Valve set Elite

مقاس/م Size/mm	تعبئة Packing	Art No.
1”	1	1544

تطويله محبس دفن
Concealed Valve Extension

مقاس/م Size/mm	تعبئة Packing	Art No.
--	1	2457

محبس عدم رجوع ٢ لاكور
PPRC Non-Return Brass Valve

مقاس/م Size/mm	تعبئة Packing	Art No.
25	40	1518
32	30	1519
50	15	1521

محبس بليه نحاس ٢ لاكور سوبر
PPRC Brass Ball Valve Elite

مقاس/م Size/mm	تعبئة Packing	Art No.
25	20	1476
32	15	1477
40	10	1478
50	7	1479
63	5	1480
75	1	1481
90	1	1482
110	1	1483

محبس بليه نحاس ٢ لاكور اقتصادي
PPRC Brass Ball Valve Eco

مقاس/م Size/mm	تعبئة Packing	Art No.
25	20	2445
32	15	2446
50	7	2448
63	5	2449

PPR UV Fitting - PPR UV Fitting

جلبه لحام بولي بروبلين معزول
PPRC Socket UV

مقاس/م Size/mm	تعبئة Packing	Art No.
25	200	1116
32	120	1117
40	100	1118
50	48	1119
63	30	1120
75	70	1121
90	50	1122
110	40	1123

مشترك لحام بولي بروبلين معزول
PPRC T UV

مقاس/م Size/mm	تعبئة Packing	Art No.
25	90	1366
32	50	1367
40	20	1368
50	15	1369
63	12	1370
75	30	1371
90	20	1372
110	15	1373

طبه لحام بولي بروبلين معزول
PPRC Endcap UV

مقاس/م Size/mm	تعبئة Packing	Art No.
25	180	1565
32	120	1566
50	50	1568
63	30	1569

كوع لحام بولي بروبلين معزول
PPRC Elbow 90° UV

مقاس/م Size/mm	تعبئة Packing	Art No.
25	120	1246
32	60	1247
40	50	1248
50	25	1249
63	12	1250

جلبه لحام نقاص بولي بروبلين معزول
PPRC Reducer Socket UV

مقاس/م Size/mm	تعبئة Packing	Art No.
20/25	300	1182
20/32	150	1183
20/50	50	1185
20/63	30	1186
25/32	120	1187
25/50	50	1189
25/63	30	1190
32/50	50	1193
32/63	30	1194
50/63	30	1202
50/75	70	1203
63/75	70	1206
63/90	50	1207
63/110	40	1208
75/90	50	1209
75/110	40	1210
90/110	40	1211

مشترك لحام نقاص بولي بروبلين معزول
PPRC Reducer T UV

مقاس/م Size/mm	تعبئة Packing	Art No.
20/25	90	1442
20/32	50	1443
20/50	15	1445
20/63	12	1446
25/32	50	1447
25/50	15	1449
25/63	12	1450
32/50	15	1453
32/63	12	1454
50/63	12	1462

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Welding

The connection of Talent-Therm® Pipes system is very easy that done by fusion of the end of two ends to connect product by using connection tools .

Process Of the Fusion:

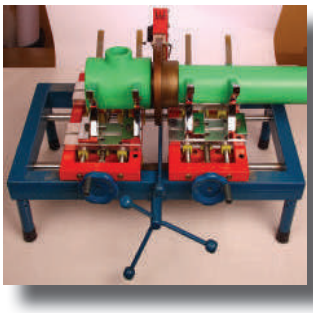
- Cut the pipe at right angles by using pipe cutter or pliers and takecare that the pipe axis is free from burrs of cutting debris .

قم بقص الماسورة باستخدام المقص او الكماشة الخاصة بذلك مع اتخاذ الحذر اللازم و مراعاة خلو سطح الماسورة من النتوءات .

- Mark the welding depth at the end of the pipe .

قم بعمل علامة بالعمق المطلوب للحام على نهاية الماسورة .

- Push the fitting and end of the pipe without turning up to the marked welding depth into the welding tool .



ادخل نهاية الماسورة والوصلة معا فى ماكينة اللحام دون ان تحركهما .

-After the heating time quickly remove pipe and fitting from the welding tool , Join them immediately without turning until the bead of PPR from the fitting covers the marked welding depth.

بعد وقت التسخين قم بإزالة الأنابيب وقطع الوصلات من أدوات اللحام بسرعة , و وصلهم فى الحال حتى يغطى جزء البولى بروبلين من الوصلات عمق اللحام المحدد .

Attention

-Do not push the pipe too far into the fitting, as this would reduce the bore and in extreme case close the pipe .

-The joint elements have to be fixed , Never turn the elements or align the connection after the processing time.

-After the cooling period the fused joint is ready for use.

لا تدفع الماسورة بقوة بعيدا داخل قطع الوصلات , لأن ذلك سيقلل التجويف ومن الممكن ان يسد الماسورة او يتلفها .

لا تقم أبدًا بتحريك القطع بعد وقت المعالجة باللحام .

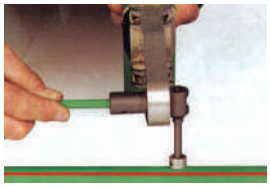
بعد فترة التبريد , يصبح المفصل المنصهر جاهزًا للاستخدام .

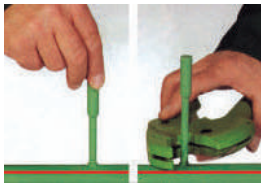
Note : It Is essential to observe the below mentioned heating times :

Pipe External (mm)	Welding Depth (mm)	Heating Time sec. indoor	sec.outdoor	Welding Time sec.	Cooling Time min.
20	14.0	5	8	4	2
25	15.0	7	11	4	2
32	16.0	8	12	6	4
40	18.0	12	18	6	4
50	20.0	18	27	6	4
63	24.0	24	36	8	6
75	26.0	30	45	8	8
90	29.0	40	60	8	8
110	32.0	50	75	10	8

Hole Repair

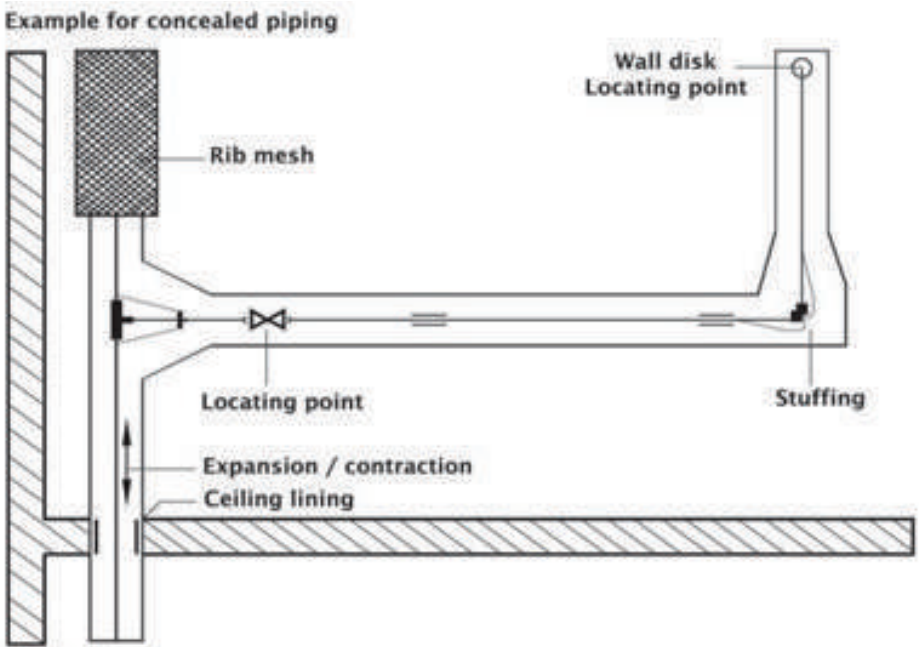
Damaged or perforated pipes could be repaired by using a special tool , and the repaired part can work again under pressure .
First you should mark the degree of the push –in depth on the repair plug , Distance tool to be fixed according to the wall thickness of the pipe and tighten the screw .
Heat up the borehole and the welding plugs with the repair set for 15 seconds . After removing the welding device ,set in the repair plug precisely without twisting it .
After a cooling time of 5 minutes , remove the protruding end of the repair plug .





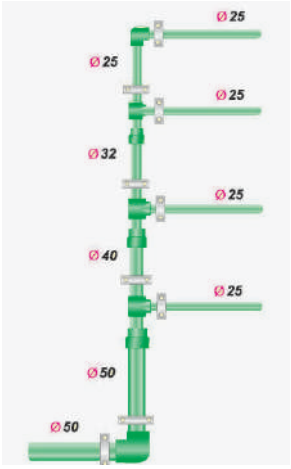
INSTALATION

As drinkable water systems should be protected from heat and condensation according to DIN 1988 standard . The following diagram shows the standard values for minimum insulation thickness .

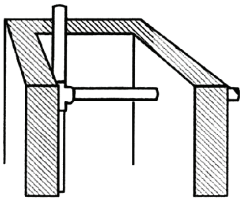


Installation

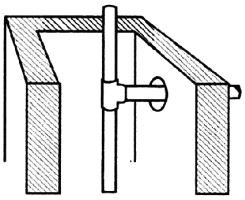
- The pipelines must be divided into individual sections to avoid uncontrolled movements of the pipe .
- The fixed points have to be measured and installed in away that the force of pipes expansion and probable additional are accommodated.
- Risers don't require expansion loops provided that fixed points are located immediately before and after a branch .
- To compensate linear expansion force of pipes must use sufficient and stable clamps and mounting .
- Sliding clamps have to allow axial movements of the pipe without damaging the pipe clamp it has to be ensured that movements of the pipelines are not hindered by fittings or armatures installed next to the clamp .



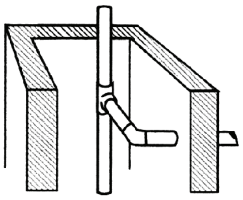
- When installing Sanitary and appartment's pipes system from the main pipe , you can apply these techniques to compensate the pipe's thermal expansion .



You can make pipe connection at some distance away from the wall .



connecting pipe can be passed through a hole much larger than the pipe diameter.



You can make apartment connection through a branch Pipe to provide flexibility.

Types Of Installation

- Distribution Network for domestic water and heating in residential buildings.
- In front of the wall installation .
- Distribution network heating technique .
- Concealed installation.
- Surface installation.

Type Of Installation	Installation Thickness
Pipes located in an accessible unheated place	4 mm
Pipes located in an accessible heated place	9 mm
Pipes located in a ventilation system , far from hot water pipes	4 mm
Pipes located in a ventilation system , near a hot water pipes	13 mm
Pipes located in a ventilation system close to water pipes	4 mm
Pipes located in a riser pipe set close to water pipes	13 mm
Pipes located on a concrete slab	4 mm

Distances between the supporting points

The type and number of the pipe fixings , depend on the type of structure and the longitudinal expansion . The fixed points divide pipe into sections , The different pipe sections are maintained by sliding hinges , The distances between those fixes supporting points depend on the working conditions and the weight of the pipes including that of the fluid which is conveyed.

Φ mm	Distance between the supporting Points in cm. at different temperatures						
	20 ° C	30 ° C	40 ° C	50 ° C	60 ° C	80 ° C	100 ° C
16	75	70	70	65	65	55	40
20	80	75	70	70	65	65	45
25	85	85	85	80	75	70	50
32	100	95	95	90	85	75	55
40	110	110	105	100	95	85	60
50	125	120	115	110	105	90	70
63	140	135	130	125	120	105	80
75	155	150	145	135	130	115	85
90	165	165	155	150	145	125	95
110	185	180	175	165	160	140	105

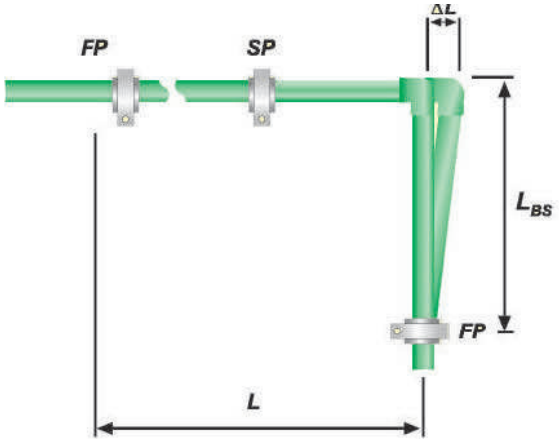
The pipe Bracket spacing given in the table may be increased by 30 % in the case of vertical pipe runs .

Linear Expansion

The Linear Expansion of PP-R pipes depends on the difference of operation temperature to installation temperature ΔT = T operating – T installation temperature
Calculation of the Linear Expansion ΔL Formula is : $\Delta L = \alpha \times L \times \Delta T$
Where ΔL : Linear Expansion , L : pipe Length , ΔT : Temperature difference
α : coefficient of linear expansion = 0.15 mm / mk

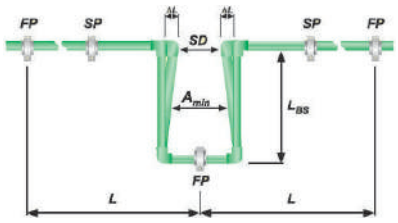
Bending Side Length

$$L_{BS} = K \times \sqrt{d \times \Delta L}$$



Expansion loop

L BS = The Bending Side Length
A min = Width of the expansion loop (mm)
SD = safety distance 150 mm
The pipe bend A min is calculated to the following formula :
A min = 2 x ΔL + SD
The width of expansion loop A min should be at least 210 mm .

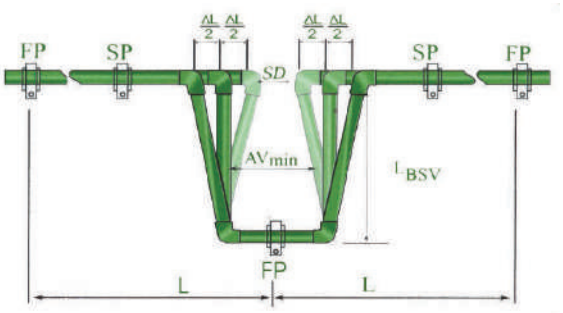


Pre-stress

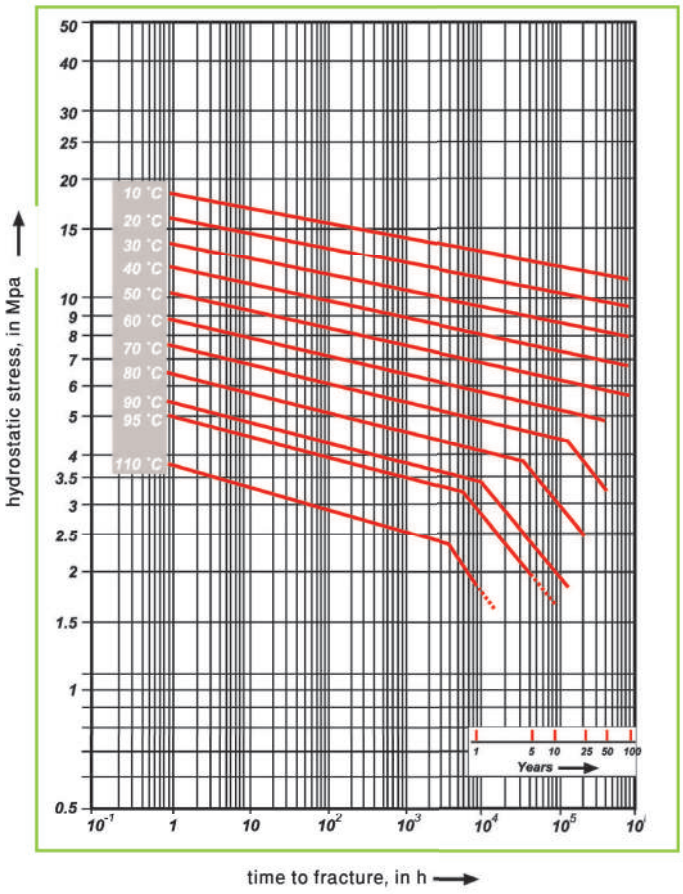
When space is limited , it is possible to shorten the total width A min as well as the bending side length L BS by its pre stressing

$$L_{BSY} = K \times \sqrt{d \times \Delta L/2}$$

Where
L bsv : length of the bending side
K : Material specification constant = 15.5
D : outside diameter (mm)



Long Term Behavior of PPR Pipes



Accordind to DIN 8078

Cold Water Supply

Permanent operating temperature up to 20 ° C

Permanent operating pressure up to 20 bar

Hot Water Supply

Permanent operating temperature up to 70 ° C

permanent operating pressure up to 10 bar

Heating Supply

Permanent operating temperature up to °70 C

permanent operating pressure up to 3 bar

Utilisation of at least 50 years

Allowable working Pressure

The below table is about the permanent temperature from 70 ° C to 95 ° C and its affect on the service life .

Temperature ° C	Years of service	Pipe series							
		20	16	12.5	8.3	5	3.2	2.5	2
		Standard Dimention Ratio							
		41	33	26	17.6	11	7.4	6	5
		Allowable working pressure(Bar) for pipes transporting ppr 80 with SF = 1.5							
10	1 5 10 25 50 100	4.4 4.2 4.0 3.9 3.8 3.7	5.6 5.3 5.1 4.9 4.8 4.7	7.0 6.6 6.4 6.2 6.0 5.9	10.6 10.0 9.7 9.4 9.1 8.9	17.6 16.6 16.1 15.6 15.2 14.8	27.8 26.4 25.5 24.7 24.0 23.4	35.0 33.2 32.1 31.1 30.3 29.5	44.2 41.8 40.4 39.1 38.1 37.1
20	1 5 10 25 50 100	3.8 3.5 3.4 3.3 3.2 3.1	4.8 4.5 4.3 4.2 4.1 4.0	6.0 5.6 5.5 5.3 5.1 5.0	9.0 8.5 8.2 8.0 7.8 7.5	15 14.1 13.7 13.3 12.9 12.5	23.8 22.3 21.7 21.1 20.4 19.8	30.0 28.1 27.3 26.5 25.7 24.9	37.8 35.4 34.4 33.4 32.4 31.4
30	1 5 10 25 50 100	3.2 3.0 2.9 2.8 2.7 2.7	4.0 3.8 3.7 3.5 3.4 3.4	5.1 4.8 4.6 4.4 4.3 4.2	7.7 7.2 7.0 6.7 6.6 6.4	12.8 12.0 11.6 11.2 10.9 10.6	20.2 19.0 18.3 17.7 17.3 16.9	25.5 23.9 23.1 22.3 21.8 21.2	32.1 30.1 29.1 28.1 27.4 26.4
40	1 5 10 25 50 100	2.7 2.5 2.5 2.4 2.3 2.2	3.4 3.2 3.1 3.0 2.9 2.8	4.3 4.0 3.9 3.8 3.7 3.5	6.5 6.1 5.9 5.7 5.5 5.4	10.8 10.1 9.8 9.4 9.2 8.9	17.1 16.0 15.6 15.0 14.5 14.1	21.5 20.2 19.6 18.8 18.3 17.8	27.1 25.4 24.7 23.7 23.1 22.4
50	1 5 10 25 50 100	2.3 2.1 2.1 2.0 1.9 1.9	2.9 2.7 2.6 2.5 2.4 2.4	3.7 3.4 3.3 3.2 3.1 3.0	5.5 5.1 5.0 4.8 4.6 4.5	9.2 8.5 8.2 8.0 7.7 7.2	14.5 13.5 13.1 12.6 12.2 11.8	18.8 17.0 16.5 15.9 15.4 14.9	23.1 21.4 20.7 20.0 19.4 18.7
60	1 5 10 25 50	1.9 1.8 1.7 1.7 1.6	2.4 2.3 2.2 2.1 2.0	3.1 2.9 2.8 2.6 2.5	4.6 4.3 4.2 4.0 3.8	7.7 7.2 6.9 6.7 6.4	12.2 11.4 11.0 10.5 10.1	15.4 14.3 13.8 13.3 12.7	19.4 18.0 17.4 16.7 16.0
70	1 5 10 25 50	1.6 1.5 1.5 1.3 1.1	2.1 1.9 1.9 1.6 1.3	2.6 2.4 2.3 2.0 1.7	3.9 3.6 3.5 3.0 2.6	6.5 6.0 5.9 5.1 4.3	10.3 9.5 9.3 8.0 6.7	13.0 11.9 11.7 10.1 8.5	16.4 15.0 14.7 12.7 10.7
80	1 5 10 25	1.4 1.2 1.0 --	1.7 1.5 1.3 1.0	2.2 1.9 1.6 1.3	3.3 2.9 2.4 1.9	5.5 4.8 4.0 3.2	8.6 7.6 6.3 5.1	10.9 9.6 8.0 6.4	13.7 12.0 10.0 8.0
95	1 5 (1 (10)	1.0 -- --	1.2 -- --	1.5 1.0 --	2.3 1.5 (1.3)1)	3.6 2.5 (1(2.0)	6.1 4.0 (3.4)1)	7.7 5.0 (4.2)1)	9.7 6.3 (5.3)1)

1) The bracketed values apply where testing can be shown to have been carried Out for longer than one year at 110 ° C .

Pressure Test

Technical rules for potable water installation DIN 1988 , All pipes have to be hydraulically pressure tested , The Test pressure has to be 1.5 times of the operating pressure .
For The preliminary test a test pressure of 1.5 times of the highest possible operating pressure has to be produced . this test has to reestablished twice within 30 minutes with in an interval of 10 minutes .
After a test time of further 30 minutes , the test pressure must not drop more than .6 bar and no leakage should have appeared .

After pipe work is filled with water and completely vented to release air locks in the system testing can begin :

1. Test pressure = (permissible working pressure + 5 bar) shall be produced 2 times within 30 minutes at 10 minutes intervals .
   Restore by hand pump to required test pressure after the 10 minutes interval if the pressure drops .

2. If no leakage is detected for the next 30 minutes , check if the pressure has dropped by more than 0.6 bar within this period , leakage must have occurred , detect and rectify .

3. If pressure drop is within 0.6 bar and no leakage detected , continue the test without restoring the required pressure for the next 120 minutes .

4. During this time it should be checked if the pressure drop is more than 0.2 bar within this period , leakage must have occurred , Detect , rectify and repeat procedure .

5. Pressure test is successful when the entire above are met and the readings should be recorded .

Flow Rate :

The basis of determining the maximum flow rate should be calculated on the desired flow rate of each water point , The simultaneous use respectively .

Section of the installation	Max. calculate flow rate at run	
	15 min. m/s	>15 min. m/s
Connecting pipes	2	2
Service pipes parts with poor drag reducing passage armature (2.5<)*	5	2
Parts with passage armatures with a higher correction vale loss **	2.5	2

* piston valve acc. To DIN 3502
** Screw down stop globe valve acc. To DIN 3512

V. 7.0 PPS
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